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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,173	04/20/2001	Hiroshi Ando	1-137	1558

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EXAMINER

TRAN, TAN N

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,173

Examiner

TAN N TRAN

Applicant(s)

ANDO ET AL.

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, each of the plurality of temperature compensation elements being arranged to be overlap with a corresponding one of the plurality of sensor elements as recited in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1,12, lines 5 and 7, “a measurement member to measure a temperature of the measurement member” is unclear as to whether it is being referred to a measurement member to measure a temperature of the sensor elements.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,7,8,11,12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoshi et al. (JP-09-218086).

With regard to claims 1,11,12, Satoshi et al. disclose an infrared image sensor comprising: a semiconductor substrate 5a; a sensor array composed of a plurality of sensor elements (1A-1C) provided on the semiconductor substrate 5a for respectively providing thermal image data; and a plurality of metal films 8 serve as a plurality of temperature compensation elements provided on the semiconductor substrate 5a, each of the plurality of metal films 8 being arranged to be adjacent to one of the plurality of sensor elements. (Note fig. 3 of Satoshi et al.). It is inherent that a plurality of metal films 8 performing temperature correction to output of the corresponding one of the plurality of sensor elements (1A-1C) because the current value which flows into each of sensor element (1A-1C) is read by the external digital circuit disposal circuit through the metal films 8, and the energy distribution of the infrared radiation which carries out incidence from each current value is imaged. Thus, the temperature of sensor elements will be distributed into the metal films 8.

Satoshi et al. discloses all the claimed subject matter except for measurement member to measure a temperature of the sensor. However, it would have been obvious to one of ordinary

skill in the art to form measurement member to measure a temperature of the sensor because such structure is conventional in the art for obtaining the temperature data of the sensor elements.

Satoshi et al. discloses all the claimed subject matter except for a sensor array composed of a plurality of blocks and each of which is composed of a plurality of sensor elements. However, it would have been obvious to one of ordinary skill in the art to form the sensor array of Satoshi et al. composed of a plurality of blocks and each of which is composed of a plurality of sensor elements in order to form a compact and high density sensor device.

With regard to claim 7, Satoshi et al. discloses each of the plurality of sensor elements (1A-1C) and the plurality of temperature compensation elements 8 has a membrane structure. (Note fig. 3 of Satoshi et al.)

With regard to claim 8, Satoshi et al. discloses an area of the each of metal films 8 is smaller than that of the corresponding one of the plurality of sensor elements (1A-1C). (Note fig. 3 of Satoshi et al.).

Allowable Subject Matter

4. Claims 2-6,9,10,13-16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 2-6, 9,10,13-16 are allowable over the prior art of record, because none of these references disclose or can be combined to yield the claimed invention such as the plurality of temperature compensation elements are provided on the non-irradiation surface of the semiconductor substrate as recited in claims 2,13, the each temperature compensation element is

disposed at a downstream side of the corresponding one of the plurality of sensor elements in an incident direction of the infrared radiation to the semiconductor substrate as recited in claim 9.

Conclusion


5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tan Tran whose telephone number is (703) 305-3362. The examiner can normally be reached on M-F 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TT

April 2003


Daniel H. Tran
Primary Examiner